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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,025	10/10/2003	Keiji Yamamoto	046601-5120	8009
9629	7590	01/24/2005	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			CHEN, SOPHIA S	
			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/682,025

Applicant(s)

YAMAMOTO ET AL.

Examiner

Sophia S. Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/21/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: UI (page 18, line 1) and P26 (page 18, line 5; P1 to P45). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to because of the following informality: Figure 11, step S402, "C<Cs" should be "D<Ds". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several

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views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

4. The disclosure is objected to because of the following informalities:

- a. Page 18, line 16, "P 40" should be "P40".
- b. Page 18, line 23, "101" should be "S101".
- c. Page 18, line 26, "102" should be "S102".
- d. Page 19, line 12, "103" should be "S103".
- e. Page 19, line 20, "104" should be "S1042".
- f. Page 20, line 5, "105" should be "S105".
- g. Page 20, line 14, "106" should be "S106".
- h. Page 21, line 6, "107" should be "S107".
- i. Page 21, line 15, "108" should be "S108".

- j. Page 22, line 7, "109j" should be "S109".
- k. Page 22, line 9, "102 to 108" should be "S102 to S108".
- l. Page 22, line 10, "110" should be "S110".
- m. Page 22, line 11, "111" should be "S111".
- n. Page 22, line 12, "109" should be "S109".
- o. Page 22, line 13, "102 to 108" should be "S102 to S108".
- p. Page 22, line 15, "102" should be "S102".
- q. Page 22, line 20, "201" should be "S201".
- r. Page 22, line 23, "202" should be "S202".
- s. Page 23, line 1, "203" should be "S203".
- t. Page 23, line 2, "204" should be "S204".
- u. Page 23, line 5, "202" should be "S202".
- v. Page 23, line 10, "205" should be "S205".
- w. Page 23, line 13, "206" should be "S206".
- x. Page 23, line 18, "207" should be "S207".
- y. Page 23, line 20, "208" should be "S208".
- z. Page 23, line 22, "206" should be "S206".
- aa. Page 23, line 25, "103" should be "S103".
- bb. Page 24, line 4, "301" should be "S301".
- cc. Page 24, line 6, "302" should be "S302".
- dd. Page 24, line 11, "303" should be "S303".
- ee. Page 24, line 12, "304" should be "S304".

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- ff. Page 24, line 14, "302" should be "S302".
- gg. Page 24, line 16, "104" should be "S104".
- hh. Page 24, line 21, "401" should be "S401".
- ii. Page 24, line 23, "402" should be "S402".
- jj. Page 24, line 27, "403" should be "S403".
- kk. Page 25, line 2, "404" should be "S404".
- ll. Page 25, line 4, "402" should be "S402".
- mm. Page 25, line 6, "105" should be "S105".
- nn. Page 25, line 12, "501" should be "S501".
- oo. Page 25, line 14, "502" should be "S502".
- pp. Page 25, line 19, "503" should be "S503".
- qq. Page 25, line 20, "504" should be "S504".
- rr. Page 25, line 22, "502" should be "S502".
- ss. Page 25, line 25, "106" should be "S106".
- tt. Page 25, line 27, "601" should be "S601".
- uu. Page 26, line 4, "602" should be "S602".
- vv. Page 26, line 9, "603" should be "S603".
- ww. Page 26, line 11, "604" should be "S604".
- xx. Page 26, line 13, "602" should be "S602".
- yy. Page 26, line 17, "605" should be "S605".
- zz. Page 26, line 21, "606" should be "S606".
- aaa. Page 26, line 26, "607" should be "S607".

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bbb. Page 27, line 1, "608" should be "S608".

ccc. Page 27, line 3, "606" should be "S606".

ddd. Page 27, line 5, "107" should be "S107".

eee. Page 27, line 7, "108" should be "S108".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 4, 5, 7, 10, 12, 13, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Conrow et al. (US Pat. No. 6,763,199 B2)

The patent discloses an image forming apparatus and method comprising: an image forming part that forms an image (test pattern) 150 on a recording material 100 (column 1, lines 12-19; column 5, lines 3-12 and 39-41); a read part that reads the image 150 formed on the recording material 100 by the image forming part (column 5, lines 62-67); an adjusting part that adjusts a use condition of an image forming member used in the image forming part on the basis of image data read by the read part (column

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15, line 45 to column 16, line 27); the adjusting part adjusts the use condition of the image forming member exerting an influence on at least one of vertical and horizontal scaling factors of the image, parallelism, squareness, lead registration, side registration, and side skew (Figure 13A); a storing part that stores the use condition of the image forming member used for adjustment by the adjusting part (column 16, lines 28-30; column 17, line 57 to column 18, line 12); the storing part stores the use condition of the image forming member for each type of recording material 100 used (column 2, lines 40-42 and 49-53; column 17, lines 54-56); the image forming part forms images on both sides of the recording material 100; the read part reads the images formed on the both sides of the recording material 100 by the image forming part; the adjusting part adjusts the use condition of the image forming member used in the image forming part on the basis of the image data read by the read part, for each side of the recording material 100 (column 14, lines 11-25); and the image formed by the image forming part is a test pattern 150 (column 5, lines 39-50).

7. Claims 1, 4, 6, 10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakai et al. (US Pat. No. 5,887,223)

The patent discloses an image forming apparatus and method comprising: an image forming part 100 that forms an image (a reference pattern) a1 or a2 on a recording material B (column 8, line 66 to column 11 and Figure 5); a read part (optical sensor) 10 that reads the image a1, a2 formed on the recording material B by the image forming part (column 9, lines 12-19 and Figure 7); an adjusting part that adjusts a use condition of an image forming member used in the image forming part on the basis of

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image data read by the read part 10 (column 8, lines 35-40 and 48-52; column 11, lines 2-10); a storing part 46 that stores the use condition of the image forming member used for adjustment by the adjusting part (Figure 2); the storing part stores the use condition of the image forming member for each environment in which a recording material B of the same type is used (column 10, lines 28-33 and column 11, lines 40-50); and the image formed by the image forming part is a test pattern a1, a2 (column 8, line 66 to column 9, line 3).

8. Claims 1, 2, 7-10, 12, 13, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakata et al. (US Pat. No. 6,687,471 B2)

The patent discloses an image forming apparatus and method comprising: an image forming part 50 that forms an image (test pattern) PP on a recording material p (column 17, lines 11-19; column 19, lines 4-14; and Figure 3(a)); a read part 138 that reads the image PP formed on the recording material p by the image forming part 50 (column 18, line 58 to column 19, line 3 and Figure 4); an adjusting part that adjusts a use condition of an image forming member used in the image forming part on the basis of image data read by the read part 138 (column 21, lines 20-44); the adjusting part adjusts the use condition of the image forming member exerting an influence on at least one of vertical and horizontal scaling factors of the image, parallelism, squareness, lead registration, side registration, and side skew (column 26, lines 34-47; column 28, lines 16-21); the image forming part forms images on both sides of the recording material p; the read part 138 reads the images formed on the both sides of the recording material p by the image forming part; the adjusting part adjusts the use condition of the image

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forming member used in the image forming part on the basis of the image data read by the read part 138, for each side of the recording material p (column 26, lines 22-47; column 28, lines 8-21); an instruction part (also a display part) 112 that provides instruction for adjustment on a use condition of an image forming member used in the image forming part on the basis of image data read by the read part (column 26, lines 48-63; column 28, lines 22-37; and Figures 7 and 8); and the image formed by the image forming part is a test pattern PP (Figure 3(a)).

9. Claims 1, 4, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (US Pat. No. 5,576,811)

The patent discloses an image forming apparatus and method comprising: an image forming part that forms an image (test pattern) 108 on a recording material 114 (Figures 1 and 6); a read part 608 that reads the image 108 formed on the recording material 114 by the image forming part (Figures 6 and 8); an adjusting part that adjusts a use condition of an image forming member used in the image forming part on the basis of image data read by the read part 608 (column 8, lines 16-23 and Figures 1 and 8); a storing part that stores the use condition of the image forming member used for adjustment by the adjusting part (column 9, lines 50-57); and the image formed by the image forming part is a test (grid) pattern 108 (Figures 6, 7, and 10).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conrow et al. in view of Kodama (US Pat. No. 5,742,867) and Hirai et al. (US Pat. No. 6,148,168)

Conrow et al., as discussed above, differs from the instant claimed invention in not disclosing the adjusting part (or step) determines an image misregistration value on the basis of the image data obtained by the read part (or step), and if the obtained misregistration value is larger than a predetermined specification value, adjusts the use condition of the image forming member.

Kodama discloses an image forming apparatus and method comprising an image forming part for forming an image C1-C4, M1-M4 on a recording material P (Figure 6); a read part 1 that reads the image formed on the recording material P by the image forming part (column 8, lines 11-19); an adjusting part determines an image misregistration value on the basis of the image data obtained by the read part (or step),

and if the obtained misregistration value is larger than a predetermined specification value, adjusts the use condition of the image forming member (column 8, lines 20-32).

Hirai et al. discloses an image forming apparatus and method comprising an image forming part for forming an image P0, P1 on a recording material (column 10, lines 8-10); a read part 232 that reads the image formed on the recording material by the image forming part (column 8, lines 40-42 and Figure 3); an adjusting part determines an image misregistration value on the basis of the image data obtained by the read part (or step), and if the obtained misregistration value is larger than a predetermined specification value, adjusts the use condition of the image forming member (column 10, lines 23-29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the determining concept as taught by both Kodama and Hirai et al. to the adjusting part of Conrow et al. to effectively adjust/correct any misregistration.

Allowable Subject Matter

13. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sawaki (US Pat. No. 6,151,460) discloses an image forming apparatus comprising an image forming part; an image reading part; and an adjusting part.

Fujimoto et al. (US Pat. No. 6,243,542 B1) discloses an image forming apparatus comprising a patch formed on an intermediate transfer member or a recording material is detected by a sensor; a density control; and a calibration process.

McIntyre (US Pat. No. 6,490,421 B2) discloses an image forming apparatus comprising an image forming part and an adjusting part.

Regimbal et al. (US Pat. No. 6,563,524 B1) discloses an image forming apparatus comprising a grid pattern.

Kazama (US Pat. Pub. No. US 2003/0175602 A1) discloses an image forming apparatus comprising a registration step.

Sievert et al. (US Pat. Pub. No. US 2004/0085378 A1) discloses an image forming apparatus selectively analyzing the at least one calibration mark and producing calibration data.


Takaoka (JP 2001-022141 A) discloses an image forming apparatus comprising an image forming part; an image reading part; and an adjusting part.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (571) 272-2133. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
January 19, 2005